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Our Ref.: 2590-30
Your Ref.: 09/806,831 Date: October 17, 2003

To: Examiner Kaveh C. Kianni – Group Art Unit 2877
Firm: U.S. Patent and Trademark Office
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From: Michael J. Shea

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Debbie Phelps
FACSIMILE OPERATOR

ATTACHMENT/S: **Discussion Points for Interview**

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#784389 v1 - 2590-30-fax-cvr-exr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application:

Atty. Ref.: 2590-30

BEVILACQUA et al.

Group Unit: 2877

Serial No.: 09/806,831

Examiner: K. Kianni

Filed: April 5, 2001

For: METHOD AND APPARATUS FOR MEASURING
LOCALLY AND SUPERFICIALLY THE SCATTERING
AND ABSORPTION PROPERTIES OF TURBID MEDIA**DRAFT**

October 17, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**DISCUSSION POINTS FOR INTERVIEW**

Sir:

Applicants submit the following discussion points for a personal interview with Examiner Kianni in connection with the subject patent application.

(1) The parameter $\gamma = (1 - g_2)/(1 - g_1)$ described in the subject patent application and specified in claim 1 is a new concept and is not related to g and g' appearing in equation 13 of Wu *et al.*: $k(g')/k(g) = 1 - g'/1 - g$. Specifically, g and g' are both first order moments, whereas g_1 and g_2 are respectively the first and second order moments of the development of the phase function $p(\theta)$ in Legendre polynomials. Consequently, the parameter γ and equation 13 of Wu *et al.* are quite different. Indeed, Wu *et al.* does not mention the second order moment of the phase function. The approach of the subject application is fundamentally different and cannot be derived from Wu *et al.*'s approach.

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DRAFT

(2) The subject patent application discloses a system and method for determining optical characteristics such as the absorption coefficient μ_a , the reduced scattering coefficient μ_s , and a parameter γ from the spatially resolved reflectance $R(\rho)$. This determination involves, among other things, the dependence of the diffuse reflectance R on the distance ρ separating the source of illumination and the optical detector. This dependence of R on ρ does not at all appear in Wu *et al.* The diffuse reflectance $R(\mu_a, \mu_s, g)$ of Wu *et al.* is a value of the reflectance integrated over space and does not contain any information on its dependence on the source-detector distance ρ . Although the office action of 5/20/03 refers to the "z" described in column 8 of Wu *et al.* as the "source-detector distance," "z" actually refers to tissue depth. See, e.g., col. 8, line 9-11.

Respectfully submitted,
NIXON & VANDERHYE P.C.



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